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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

EGAN, BRIAN P

ART UNIT PAPER NUMBER

1772

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,719

Applicant(s)

BEST, WALTER

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as his invention. The phrase “wave-like” is indefinite. The term “like” renders the claim indefinite because the claim includes elements not actually disclosed (those encompassed by “like”), thereby rendering the scope of the claim(s) unascertainable. The Examiner suggests deleting the term “like” to facilitate clarity. Proper clarification and/or correction are required.
3. Claim 23 is rejected for reciting a range within a range (with regards to the projection size). A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by “such as” and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). Proper clarification and/or correction are required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-14, 16, and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Stech (#4,842,905).

Stech discloses a textile web for a paper-making machine (see Abstract), which, viewed from a transverse direction, is provided with several web sections that extend parallel to one another in a lengthwise direction and are aligned adjacent to one another (see Fig. 6), with their lateral edges being attached to one another (see Figs. 1-6, 9(a-b), and 10-11), characterized in that the adjacent lateral edges follow a meandering course with alternating projections and recesses and the web sections are interlocked with one another via these projections and recesses (see Figs. 1-6, 9(a-b), and 10-11). The lateral edges may be a variety of geometric shapes – two shapes given as examples being trapezoids (Figs. 1-3, 6, and 9(a-b)) and waves (Figs. 10-11). Given that the web sections are disclosed as single-layer substrates (see Figs. 1 and 5), they are in themselves support bases.

With regards to the fastener in claim 1 and subsequent claims 4-13, Stech teaches away from the use of additional elements to help in fastening the lateral edges other than the male projections and female recesses. Instead, Stech discloses that a water soluble adhesive may be used in installation of the web sections, but that the water soluble adhesive is removed upon

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completing installation (Col. 5, lines 44-49) – ultimately, the locking nature of the projections and recesses is sufficient to assure fabric integrity (Col. 5, lines 51-53). Therefore, Stech teaches away from the use of sewn seams or adhesive along the interlocked projections and recesses.

The Examiner notes arguments that the alleged anticipatory prior art teaches away from the invention is not germane to a rejection under section 102. *Twin Disc, Inc. v. United States*, 231 USPQ 417, 424 (Cl. Ct. 1986). A reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. The question whether a reference “teaches away” from the invention is inapplicable to an anticipation analysis. *Celeritas Technologies Ltd. V. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 15, 17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stech ('905).

Stech teaches a textile web as detailed above. Stech fails, however, to explicitly teach that the projections are rectangular or zigzag in shape, and also fails to teach the size of the projections (i.e., whether the projections extend from the textile web at a distance less than 50 cm).

Stech, however, teaches that it will be recognized by those skilled in the art that the male members and female members may be a variety of geometric configurations (Col. 4, lines 45-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the projection shapes of Stech to include rectangular or zigzag shapes depending on the desired end product. Furthermore, with regards to the distance at which the projections project from the web sections, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the projection distance such that it fell within 50 cm from the web section, since such a modification would have involved a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

8. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stech ('905) in view of Diaz-Kotti (#4,798,760).

Stech teaches a textile web as detailed above. Stech fails to teach the base material comprising additional layers of fiber batt and/or synthetic netting.

Diaz-Kotti, however, teach the use of providing a fabric base for a papermaking machine with additional layers of a synthetic netting and a needled fibre batt (Col. 1, lines 63-67; Col. 5, lines 9-10). Although Diaz-Kotti does not explicitly teach the synthetic netting being provided via extrusion, the limitation is directed at the method of forming the netting material. The method of forming the article is not germane to the issue of patentability of the article itself. Therefore, the limitation has not been given patentable weight. Furthermore, even if given weight, Diaz-Kotti teaches that the fiber mesh layer is oriented next to the base fabric (Col. 2,

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lines 48-49). It is notoriously well known to those of ordinary skill in the art that extrusion is a known way of orienting a synthetic material upon a substrate. Diaz-Kotti teach the use of the additional synthetic netting and needled fibre batt for the purpose of providing a papermaking substrate which has enhanced compaction resistance and increased void volume while exhibiting higher resistance to load (Col. 1, lines 60-63). It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have combined the teachings of Stech and Diaz-Kotti since both of the aforementioned references are analogous insofar as being directed at improving papermaking fabrics.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Stech by combining the base tessled fabric with a synthetic netting material and needled fiber batt as taught by Diaz-Kotti in order to provide a papermaking substrate which has enhanced compaction resistance and increased void volume while exhibiting higher resistance to load.

9. Claims 1-5, 14-17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paquin et al. (#6,240,608) in view of Schlueter, Jr. et al. (#5,514,436).

Paquin et al. teach a textile web for a paper-making machine which, viewed from a transverse direction, is provided with several web sections that extend parallel to one another in a lengthwise direction and are aligned adjacent one another with their lateral edges being attached to one another via fasteners (see Abstract). The web sections are extruded, synthetic mesh material (Col. 5, lines 51-65). The fasteners extend primarily in a lengthwise direction and are designed to be continuous without interruption (Col. 4, lines 50-54). The fasteners are designed as sewn, stitched, melted, or welded seams (Col. 4, lines 50-54). Although it is not explicitly

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stated whether a sewn seam may exist in the form of several parallel sewn seams, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided multiple sewn seams, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Paquin et al. further teach that the web sections may be provided with carded fibre batt (Col. 7, lines 21-24).

Paquin et al. fail to teach adjacent lateral edges that follow a meandering course with alternating projections and recesses.

Schlueter, Jr. et al., however, teach a puzzle cut seam that may be formed according to any conventional shaping technique (and therefore any shape – including trapezoids, zigzags, rectangles, and waves) (Col. 4, lines 52-53; Col. 4, line 65 to Col. 5, line 5). Although Schlueter, Jr. et al. fail to explicitly teach the size of the projections to be no more than 50 cm, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the projection distance to be in accordance with the Applicant's claimed range, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). Schlueter, Jr. et al. teach the use of the puzzle cut seams for the purpose of providing a seam with enhanced strength, flexibility, and longer mechanical life than seams that are formed by butting and overlapping (Col. 8, lines 42-45). It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have combined the teachings of Paquin et al. and Schlueter, Jr. et al. since both of the aforementioned references are analogous insofar as being directed towards the belt-making art, and further

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because Schlueter, Jr. et al. is directed at alleviating an inherent problem that exists in Paquin et al. – namely, the inefficiency that exists when providing belt seams with abutting edges rather than with puzzle cut seams.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Paquin et al. by modifying the abutting seam into a puzzle cut seam as taught by Schlueter, Jr. et al. in order to providing a seam with enhanced strength, flexibility, and longer mechanical life than seams that are formed by butting and overlapping.

10. Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paquin et al. ('608) in view of Schlueter, Jr. et al. ('436), and further in view of Thorton et al. (#6,440,515) and Paquin (#6,350,336).

Schlueter, Jr. et al. and Paquin et al. ('608) teach a textile web as detailed above. The aforementioned prior art fails to teach the use of a porous heat-bonding adhesive fastener.

Thorton et al. and Paquin ('336), however, teach the use of heat-bonding adhesive fasteners in seam formation. Thorton et al. teach that the adhesive can be a hot melt adhesive (note that the disclosure of hot melt adhesive is inclusive of all forms of hot melt adhesives such as spunbonded tissues containing heat-bonding adhesive fibers, heat-bonding adhesive fibers, and bicomponent heat-bonding adhesive fibers) that is heated and pressed into the seam such that the adhesive is flattened, making it as mechanically uniform as possible with the substrate layer (Col. 5, lines 57-60). The adhesive is designed to be physically, chemically, thermally, mechanically, and electrically compatible with the substrate layer material (Col. 5, lines 41-44). Thorton et al. teach the use of an adhesive in combination with a puzzle cut seam for the purpose

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of providing a combination that acts to create a strong seam that is also smooth and mechanically uniform (Col. 5, lines 46-49). Note also that the adhesive may be an epoxy-like material, UV curable adhesive including acrylic epoxies and polyvinyl butyrals, or the adhesive can be the substrate material itself, either applied during a separate adhesive application step or else by melting the two ends sufficiently to cause adhesion of the mutually mating elements (Col. 5, lines 63-66). Paquin ('336) also teach the use of heat-bonding adhesive wherein the heat-bonding adhesive is designed as a bonding sheet that is porous for the purpose of facilitating the passage of water through the substrate (Col. 4, line 66 to Col. 5, line 2). It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have combined the teachings of the aforementioned prior art along with the teachings of Thorton et al. and Paquin ('336) since each of the cited prior art references are analogous insofar as being directed at seam formation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the aforementioned prior art by using a heat-activated adhesive to reinforce the seam as taught by both Thorton et al. and Paquin ('336) in order to provide a seam comprising a puzzle cut/adhesive combination that acts to create a strong seam that is also smooth and mechanically uniform, while also providing a porous adhesive that facilitates the passage of water through the substrate in the paper-forming process.

11. Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paquin et al. ('608) in view of Schlueter, Jr. et al. ('436), and further in view of Diaz-Kotti ('760).

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Paquin et al. and Schlueter, Jr. et al. teach a textile web as detailed above. The aforementioned prior art fails to teach web sections that are further provided with a woven textile, knitted textile, or spunbound tissue support base.

Diaz-Kotti, however, teach the use of providing a fabric base for a papermaking machine on one side of a synthetic netting with needled fibre batt applied to the opposite side of the synthetic netting (Col. 1, lines 63-67; Col. 5, lines 9-10). Diaz-Kotti teach the use of the multilayered arrangement for the purpose of providing a papermaking substrate which has enhanced compaction resistance and increased void volume while exhibiting higher resistance to load (Col. 1, lines 60-63). It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have combined the teachings of the aforementioned prior art and Diaz-Kotti since each of the cited prior art references are analogous insofar as being directed at improving belt formations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the aforementioned prior art by combining the synthetic netting material and fiber batt of Paquin et al. with a woven textile base as taught by Diaz-Kotti in order to provide a papermaking substrate which has enhanced compaction resistance and increased void volume while exhibiting higher resistance to load.

Related Prior Art

12. Although not relied upon in the above rejections, the Examiner has found the following references pertinent to the field of the Applicant's invention:

U.S. Patent #'s –

4,913,947 (Nicholas et al.)

5,571,590 (Schultz et al.)

5,202,170 (Hsu et al.)

4,698,250 (Talonon et al.)

5,843,552 (Karrfalt)


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


BPE 9/1/03


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

9/5/03